

Title (en)  
Magnetic pigment

Title (de)  
Magnetisches Pigment

Title (fr)  
Pigment magnetique

Publication  
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Application  
**EP 02016299 A 19960606**

Priority  
• CA 2440504 A 19960606  
• DE 19520398 A 19950608  
• DE 19537985 A 19951012  
• EP 96921935 A 19960606

Abstract (en)  
[origin: US6255477B1] Magnetic glass particles are prepared containing a magnetic core coated with a glass layer having a substantially pore-free glass surface. The particles are used for separating biological material such as nucleic acids. A preferred process of preparing the particles is by forming a mixture of magnetic cores with a sol formed from an alcohol and a metal alkoxide, spray-drying the mixture to coat the cores with a layer of gelled sol, and heating the coated cores to obtain the magnetic glass particles. Preferably, the particles have an average particle size of less than 100 nm and any pores of the glass surface have a diameter of less than 10 nm. The magnetic core may be a composite material containing a mica core and magnetite particles immobilized on the mica core, and the glass layer may contain boron oxide. Magnetic core materials include magnetite (Fe<sub>3</sub>O<sub>4</sub>) and Fe<sub>2</sub>O<sub>3</sub>. In using the magnetic glass particles to separate a biological material, the particles are contacted with a fluid containing the biological material such that the biological material binds to the glass surface, and the bound biological material is separated from the fluid such as by using a magnetic field. Before applying a magnetic field, the magnetic particles may sediment when contacted with the biological material.

IPC 1-7  
**C07H 1/08**; **C12N 15/10**; **B03C 1/01**; **C12Q 1/68**

IPC 8 full level  
**G01N 33/552** (2006.01); **B01J 20/28** (2006.01); **B03C 1/01** (2006.01); **C07H 1/08** (2006.01); **C07H 21/00** (2006.01); **C12N 15/09** (2006.01); **C12N 15/10** (2006.01); **C12N 15/11** (2006.01); **C12Q 1/68** (2006.01); **G01N 33/553** (2006.01); **H01F 1/00** (2006.01); **H01F 1/11** (2006.01); **H01F 1/36** (2006.01)

IPC 8 main group level  
**B03C** (2006.01); **C07H** (2006.01); **C12N** (2006.01); **C12Q** (2006.01)

CPC (source: EP US)  
**B03C 1/01** (2013.01 - EP US); **B82Y 25/00** (2013.01 - EP US); **C03C 3/078** (2013.01 - EP US); **C03C 3/083** (2013.01 - EP US); **C03C 3/085** (2013.01 - EP US); **C03C 3/087** (2013.01 - EP US); **C03C 3/089** (2013.01 - EP US); **C03C 3/091** (2013.01 - EP US); **C03C 3/102** (2013.01 - EP US); **C03C 3/105** (2013.01 - EP US); **C03C 3/108** (2013.01 - EP US); **C03C 3/111** (2013.01 - EP US); **C07H 21/00** (2013.01 - EP US); **C12N 15/1013** (2013.01 - EP US); **C12Q 1/6804** (2013.01 - EP US); **C12Q 1/6806** (2013.01 - EP US); **C12Q 1/6834** (2013.01 - EP US); **H01F 1/0063** (2013.01 - EP US); **H01F 1/112** (2013.01 - EP US); **H01F 1/36** (2013.01 - EP US); **Y10S 428/90** (2013.01 - EP US); **Y10S 435/814** (2013.01 - EP US); **Y10T 428/2996** (2015.01 - EP US)

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